



570-00



GYPSUM BOARD

INTERIOR AND EXTERIOR "■" CONSTRUCTION



- 1 Interior Gypsum Plaster
- 2 Interior Gypsum Board
- 3 Studding
- 4 Air Space
- 5 Exterior Gypsum Board
- 6 Scratch Coat Gypsum Plaster
- Exterior Cement Stucco

The Ontario Gypsum Co., Limited

Head Office—PARIS, Ont.

Branch Offices—374 Beaver Hall Sq., Montreal.
106 Don Esplanade, Toronto.

Mills—CALEDONIA, Ont.; LYTHMORE, Ont.

INTERIOR *and* EXTERIOR

General Information and Architects
Specifications on the Use of

Gypsum Board

In Place of Wood Lath

Sheathing, Forms, Etc.

Protects Life and Property
THE BEST METHOD OF FIREPROOFING FRAME
CONSTRUCTION

Ontario Gypsum Co. Ltd.

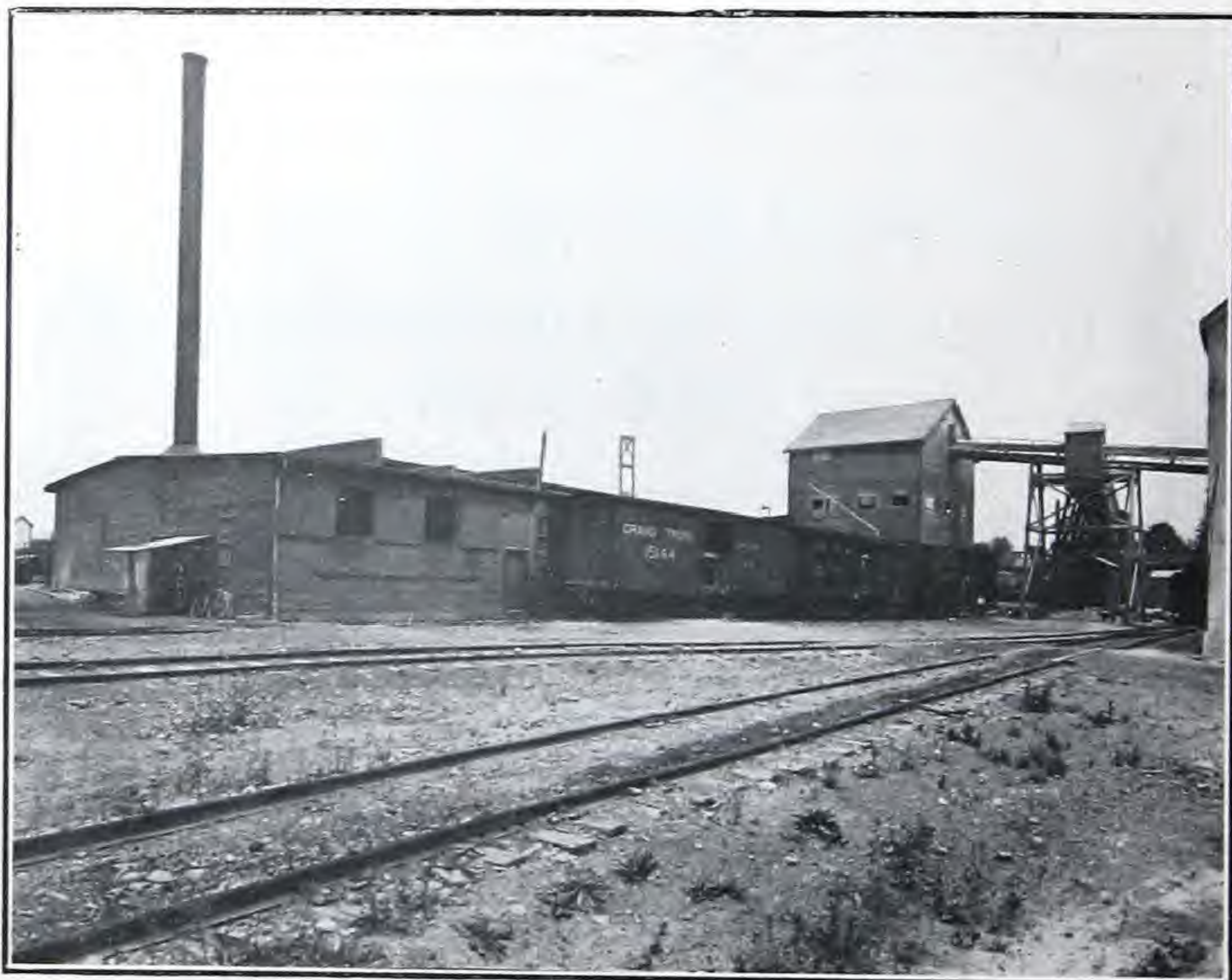
Head Office—PARIS, ONT.

Branch Offices—Toronto, 106 Don Esplanade; Montreal, 374 Beaver Hall Sq.

Factories—CALEDONIA, Ont.; LYTHMORE, Ont.



Fireproof Gypsum Board Mill at Caledonia, entirely constructed of Gypsum Board and Hardwall Plaster over Wood Frame, including Roof.



Another view of Gypsum Board Mill.

Safeguard Your Investment

This is a practical age. Old methods are dying fast. The use of wood lath means an inflammable, obsolete building. Intending builders or buyers of property should be thoroughly posted on Gypsum Board for their own protection.

This booklet tells how to avoid common and serious mistakes in interior wall construction.

There are reasons that vitally affect the commercial value and income of a building investment.

The Antiquated Wood Lath Way

Cross-Sectional View of Interior Wall—Wood Lath and Plaster

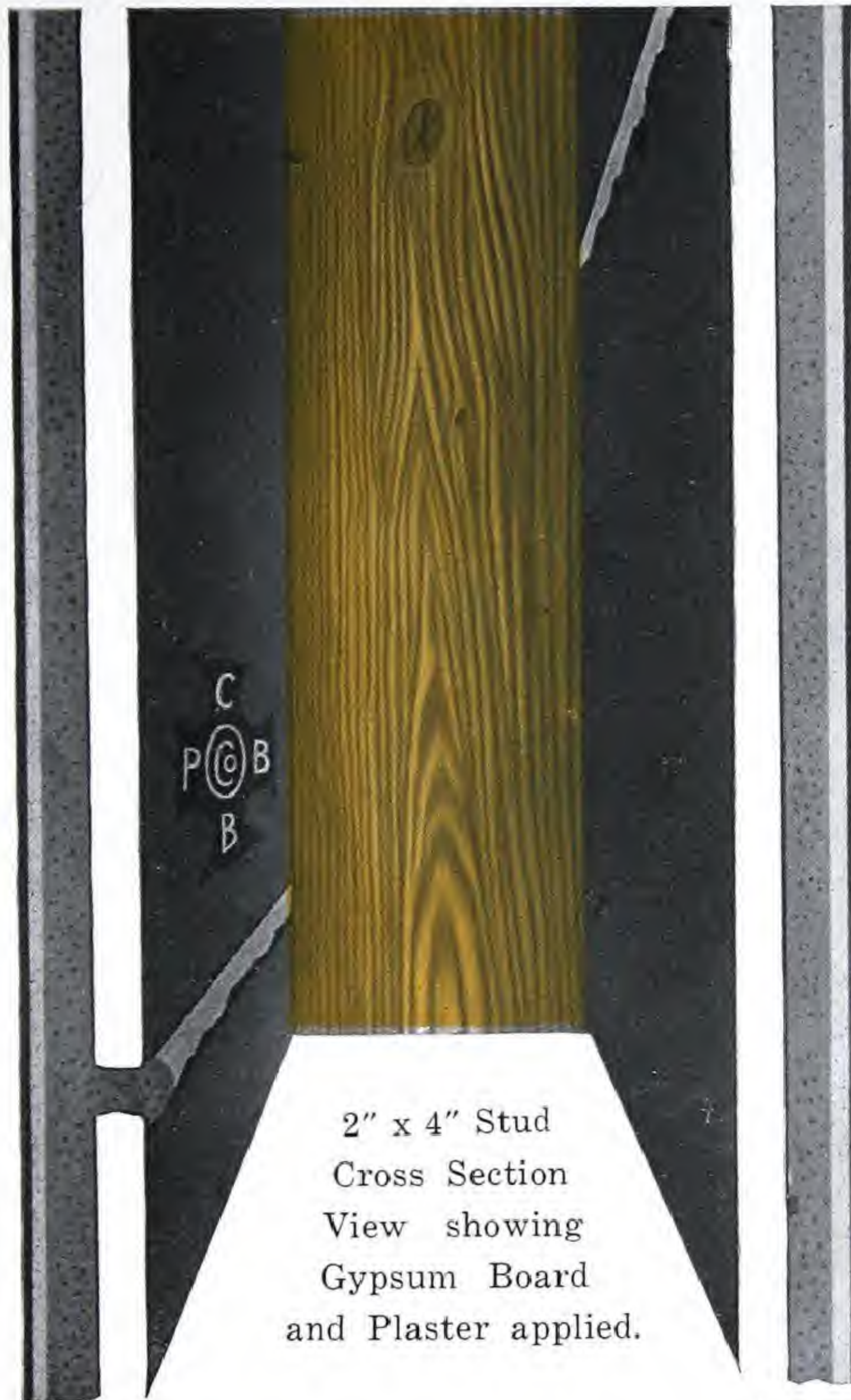
(Reduced reproduction of an actual Partition.)



WON'T BURN

Stops the Fire and Saves the Building

MODERN CONSTRUCTION



Gypsum Board

Hardwall Plaster, Base Coat

Plaster Finish Coat



A Flimsy Excuse

Faulty Plastering Surface Wrong in Principle

Wood lath are primitive—a dangerous makeshift; swell, warp, bulge, stain when wet, shrink when drying. Seldom properly applied. Wood lath to-day (due to scarcity of suitable timber) are full of knots, sap, bark, wood-dye, cross-grains, etc.

These natural defects all weaken the wall—play havoc with the plaster. This is the reason why so many walls crack.

Regardless of quality, wood lath are **Highly Inflammable!**

Why build a “Fire Trap”?



A Better Way

Perfect Plastering Surface Correct in Principle

Modern — Efficient — Safe! Application simple — speeds construction! No “sprinkling” — no saturating woodwork with water, Gypsum plaster applied to **Dry**, solid Gypsum surface, uniting perfectly into a wall solid as a rock. No swelling, warping nor bulging; no shrinking nor staining.

No defects to weaken or mar the finished wall.

Uniform in quality — and **Will Not Burn! Stops Fire!**

Build for Permanency, Comfort and Protection — Use “Gypsum” instead of wood lath and avoid wall cracks.

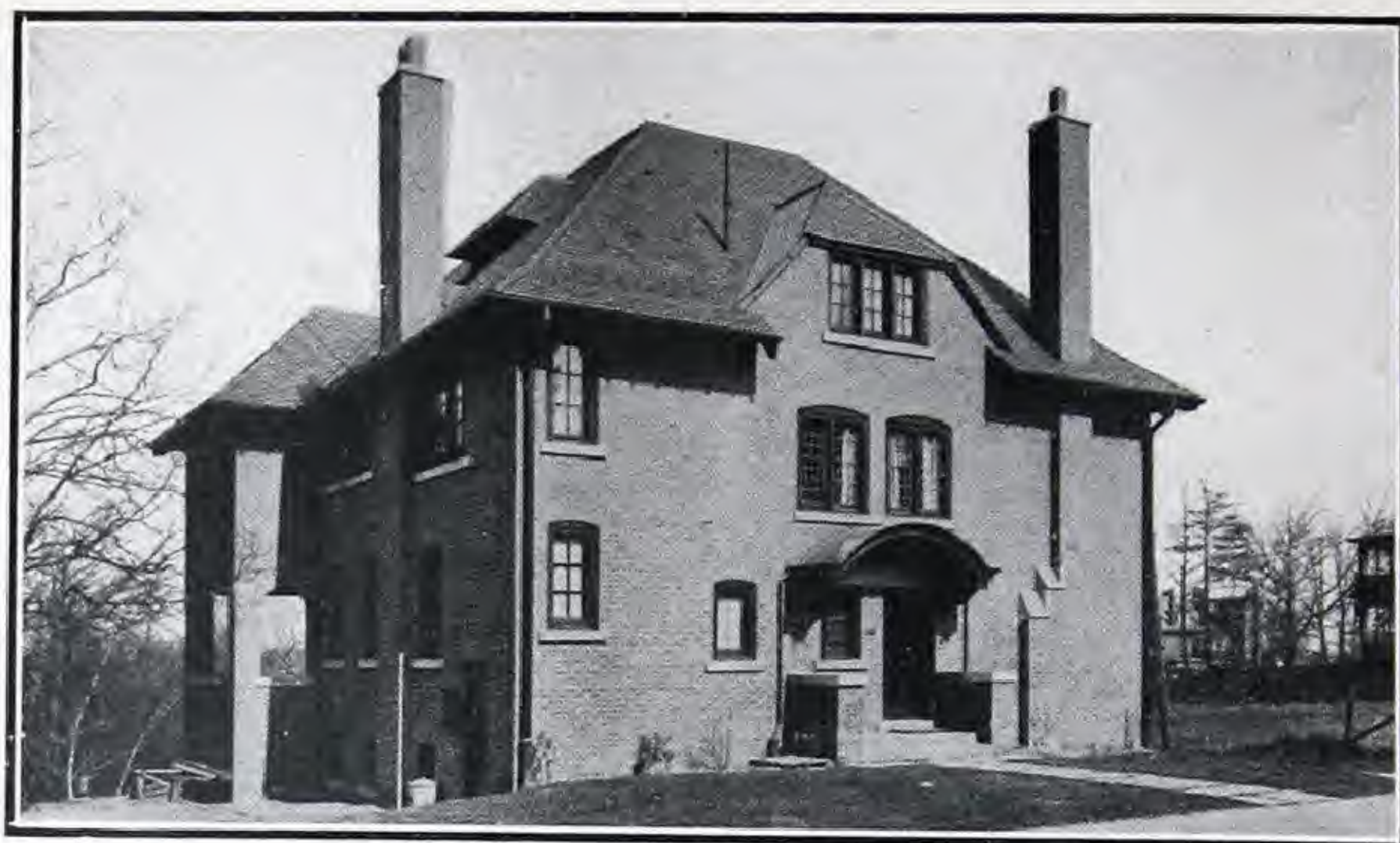
WHY BUILD TO BURN?

CHANGES of great importance are imminent in the building world. There is a strong reaction in progress against the practise of building for "frills" or "front" rather than for safety and comfort.

The property destroyed by fire in 1921, for instance, was in excess of \$45,000,000. The majority of this enormous loss was preventable, and the country is wakening to the necessity of safe construction of buildings. The wide awake investor will give serious heed to these impending changes and will see to it that the building in which he is investing capital will be so erected as not to conflict with the coming demands of tenants and buyers. With this in mind we invite your attention to the subject of BETTER INTERIOR WALLS. (GYPSUM BOARD AND PLASTER.) Whatever is said of the merits of this lathing material is directed to the one question of supreme interest to those who build to rent or sell. Is it profitable to specify Gypsum Plaster Board instead of wood lath?

In calling Gypsum Plaster Board a logical lathing material we mean that the facts in the case and the qualities of Gypsum Board, prove that it means better fire protection, more income in renting, a smaller annual depreciation, better price in selling, in short—greater profit for any builder.

We waive all considerations that do not bear directly on the question of profit. We confine ourselves directly to the proposition that is, compared with wood lath or its substitutes—metal lath, etc., Gypsum Board is most profitable.



Residence on Walmer Rd., Toronto.

Build for Permanence

No home can be properly constructed if the interior walls are poor—**Gypsum Board** makes the home more enduring and more economically maintained.

It is indispensable in the modern home because:—

- 1st—**Prevents**—Plaster Cracks, Lath Stains, Shrinkage, Wet Walls, Spread of Fire, Transmission of Sound and intrusion of vermin.
- 2nd—**Unites With Gypsum Plaster** in a wall as solid as a rock—Averts repair bills—and lessens depreciation.
- 3rd—**Makes a Perfect Foundation** for wall decoration.
- 4th—**Will Not Burn**—Protects wooden frame work from fire—Confines fire to ONE room.
- 5th—**Is an Effective Insulator**—Keeps out Winter's cold and Summer's heat—Reduces Fuel Expense.
- 6th—**Expedites Construction**—Can be applied in about one-half the time required for wood lath.
- 7th—**Avoid Plaster Waste**—All of the plaster stays on the Gypsum Board—25 per cent. of first coat is not used for making key.
- 8th—**Size and Weight**—Each sheet of Gypsum Board is 36" x 32" x $\frac{3}{8}$ " thick, weight 17 lbs. to a sheet and covers 8 sq. feet—a most convenient weight to handle.
- 9th—**Cutting Gypsum Board**—Can easily be cut any size with a saw, or by drawing the edge of a sharp hatchet across it and breaking over a straight edge.



Residence on Warren Rd., Toronto.

Uses of Gypsum Board

For use on interior partitions and ceilings Gypsum Board fills a long felt need. It is quickly and economically erected, is fireproof, soundproof, and sanitary, and when plastered with Hardwall Plaster forms a wall of great strength and durability. Everything taken into consideration, Gypsum Board and Plaster is just as cheap to apply as wood lath and plaster.

In place of wood sheathing Gypsum Board has found favor with many builders for outside sheathing, under siding, shingles or brick. The purchaser gets a full thousand feet, there is no wastage. It is never under size or knotty, and the quality is always uniform. The cost is generally less than wood sheathing. The labor costs are reduced. It does not warp or split. Is a superior heat and cold insulator. Acts as a fire-stop. Increases value of the building. Joints are permanently tight. Will not open, swell, or tear away from the nails.

For applying on the outside wall in place of sheathing the same procedure is followed as on the inside.

Gypsum Board can be used as an underflooring in place of rough lumber, and as a matter of fact can be used any place where rough lumber is commonly used and has many other advantages.

Used in conjunction with Simplex Steel Stud, it forms a partition of great strength and durability. As near soundproof as a partition can be. Endorsed by leading Architects and Underwriters.

The Proof

A most elaborate Fire Test on Gypsum Products in House Construction was carried out on the Rowntree Estate, Toronto, Ontario, June 4, 1921. The following letters and photographs are ample evidence of the success of this test and we are justly proud of the manner in which our Products stood up. A large crowd of prospective Home Builders witnessed this test and the result has been an impetus toward this type of construction.



This entire house, including exterior and interior walls, floors and roof, was built of Gypsum Board and Gypsum Plaster over wood frame.

A close up view of the house during fire. You will see that no damage has been done to exterior wall where the fire has been built against it.



The picture to the right shows the progress of the fire. The Firemen built up large piles of wood, paper and shavings saturated with oil in the front room, against the outside walls and on the roof. You will note that the shingles are burning freely and the smoke is pouring out of the windows.



The house after the fire (see cut) shows no signs of damage. On the interior one or two cracks developed in the ceiling directly above the fire. The reason for this was the green condition of the plaster. (The plastering was finished at noon and fire was lit at 4 p.m. same day.)

TELEPHONE
MAIN 5095

WILLIAM RUSSELL
CHIEF

FIRE DEPARTMENT



ADDRESS ALL CORRESPONDENCE
TO THE CHIEF OF DEPARTMENT
111 ADELAIDE STREET WEST

TORONTO
CANADA

June 9th, 1921.

TEST - GYPSUM BOARD.

Rowntree Estate,
June 4th, 1921.

3 Room House, Metal Window Frames - Glass and Doors not installed.

Conditions.

Sufficient material (inflammable) to satisfy Fire Department as likely to be amount of furniture and contents in a similar occupied house.

Test.

2 piles shavings, tar paper, kindling, boxes, planks in largest room. Similar pile against wall (outside) another on roof - 5 gallons coal oil thrown over above piles.

Result.

Fire burned over twenty-five minutes, then several pails of water thrown against walls and ceiling - openings made in ceiling and walls at hottest points, also roof - not the slightest amount of fire shown. Ceiling joists and rafters warm only.

Three Foamite Firefoam Chemicals used putting out debris, two inside, one outside. Had no apparent effect on material.

Shingles.

Made of asphalt and felt. (not fireproof) Slow burning. Burnt off side fire was started on.

Am of the opinion that if standard of material used at test with good construction, should make a most satisfactory building of that type - particularly where no fire protection exists.

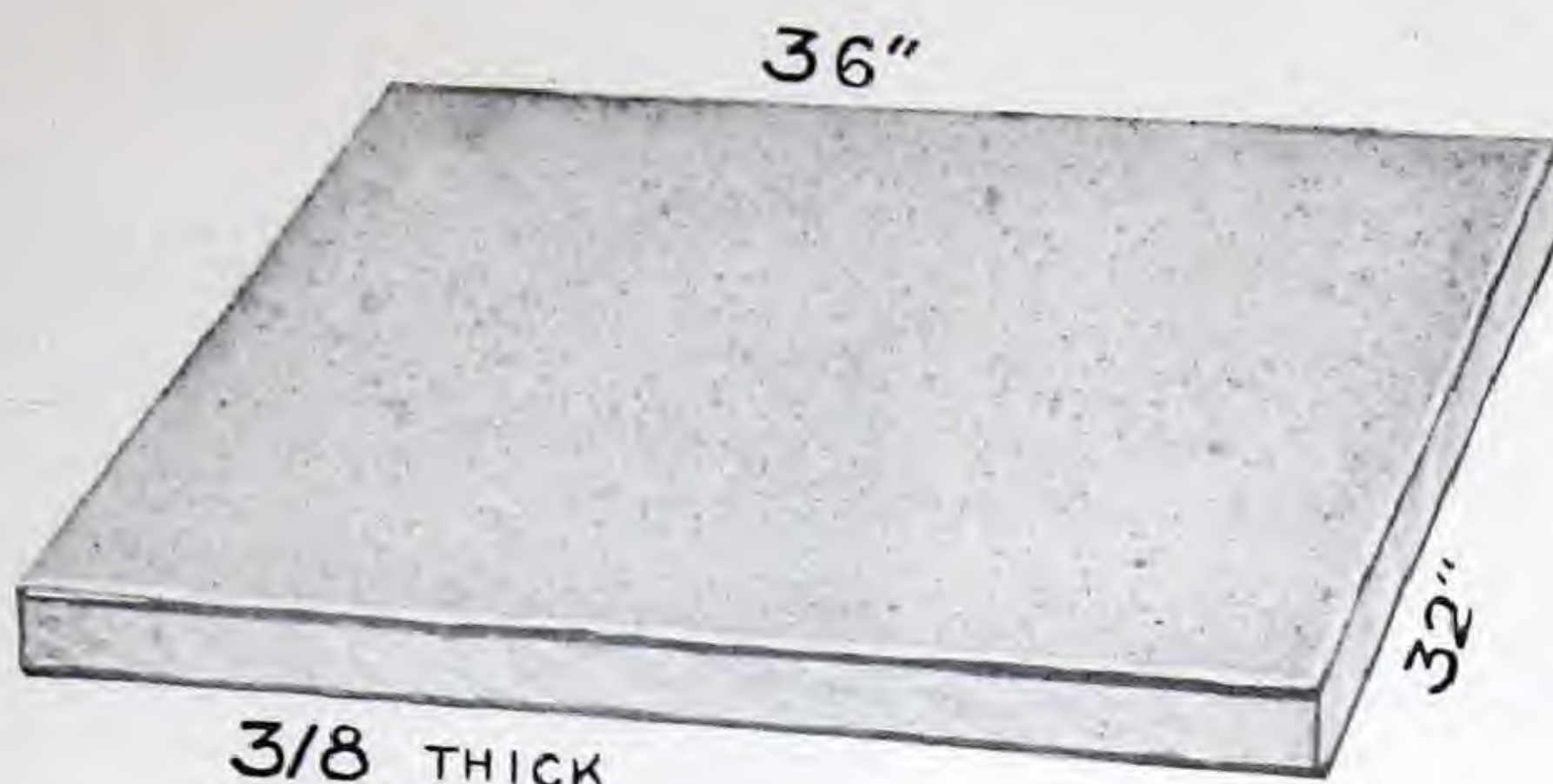
(sgd) D. McLEAN.

Ass't. Deputy.

Extract of Letter from City Architect, Toronto

"In reply, I have much pleasure in stating that it is my opinion that the building withstood well, the effects of the fires applied. An examination of the wood joisting and studding in the tested areas, after removing sections of the gypsum and plaster protective coverings, showed them to be in an undamaged condition."

"THIS IS AS I HAD EXPECTED, KNOWING THE HIGH FIRE-RESISTIVE QUALITIES OF GYPSUM."



Gypsum Plaster Board is Not A Wall Board

Gypsum Plaster Board is frequently confused with Wall Board, yet the two represent directly opposite extreme in wall construction. We manufacture a Wall Board which is practically the same in construction as Gypsum Board except that it is made in larger sheets and is adaptable for decorating, etc.

Gypsum Plaster Board is the best for the highest type of interior wall.

Hardwall Plaster only can be applied to it. The bond between them is absolutely perfect.

The use of Plaster Board is far beyond the experimental stage. It has been on the market for some twenty-five or thirty years and has proved itself beyond a shadow of doubt.

Recent figures from the Bureau of Standard at Washington, D.C., prove that the adherence of Plaster to Plaster Board is thirteen times as great as the adherence of Plaster to wood lath, and they also prove that the insulating qualities of Gypsum Board and Plaster are many times greater than the insulating qualities of wood lath and Plaster.

Consider carefully your interior walls when building your home. They are just as important to your comfort and safety as the outside walls. Insist on Gypsum Plaster Board and Plaster in place of wood lath and you will effect a real economy.

Architect's Specification for "Interior" Work

No. 1—Lath. Shall be $\frac{3}{8}$ " Gypsum Board made by Ontario Gypsum Co., Limited. Size of sheets 32x36 inches.

There is a right and a wrong side of the board. Please note that the side with trademark is applied to stud.

No. 2—Nails and Nailing. Gypsum Board shall be applied with nails $1\frac{1}{4}$ " long, 11 gauge, $\frac{7}{16}$ " flat head, obtainable from the Ontario Gypsum Co., Limited, or their supply dealers handling Gypsum Board. Nailing the Board every four inches or 27 nails to each Board on the walls, and every three inches on ceiling, 36 nails to each Board.

No. 3—Lathing. Cover all walls, ceilings and partitions throughout the entire building (except as otherwise specified) with Gypsum Board, work to be done in a satisfactory manner.

No. 4—Spaces Between Boards. Gypsum Board must be spaced $\frac{3}{8}$ " or $\frac{1}{2}$ " between each Board on horizontal joints. Can be butted tight on studs.

No. 5—Grounds. Shall be $\frac{7}{8}$ " ($\frac{3}{8}$ " Plaster Board, $\frac{1}{2}$ " plaster).

No. 6—Application of Plaster Board. Lay all Gypsum Board in parallel courses following the direction of studding, furring or joist. Break joints at right angles to studding on walls (horizontally) and at right angles to joist or furring on ceilings.

No. 7—Plastering. To be any brand of Ontario Gypsum Company's Hardwall Plaster. Mix 1 part Hardwall Plaster to $1\frac{1}{2}$ parts sharp sand by measure. Do not wet Gypsum Board before applying plaster. The bond between the plaster and the Board is perfect.

No. 8—Breaking Joints. Break joints between walls and ceilings so that a vertical joint on the wall will not meet at ceiling joint.

No. 9—Note. The continuous joint always runs with the studding or joist—across the studding or joists the joints are broken. Start each alternate course with $\frac{1}{2}$ sheet (36 x 36 inches).

No. 10—Breaking Joints on Opposite Side of Partition. Perpendicular joints on opposite sides of partitions must not be on same stud.

Caution—Do not apply lime mortar to Gypsum Board.



Architect's Specification for "Exterior" Stucco Work

No. 1—Lath. Lath shall be $\frac{3}{8}$ " thick Gypsum Board, made by Ontario Gypsum Co., Ltd.

There is a right and wrong side of the board. Please note that the side with trade mark is applied to stud.

No. 2—Size of Board. The Gypsum Board shall be 36" x 32" $\frac{3}{8}$ of an inch thick.

No. 3—Nails. Gypsum Board shall be applied on studs 16" centres with nails $1\frac{1}{4}$ " x 11 gauge, $\frac{1}{16}$ " flat head, nailed every four inches, or 27 nails to each Board, nails obtainable from the Ontario Gypsum Co., Ltd., or their agents handling Gypsum Board.

No. 4—Lathing. Cover all exterior walls of building (except as otherwise specified) with Gypsum Board, spaced about $\frac{3}{8}$ or $\frac{1}{2}$ inch apart on horizontal joints.

No. 5—Application of Gypsum Board. Lay all sheets in parallel courses, following direction of studding, break all joints at right angles to studding. Over the board apply 2" mesh galvanized wire netting, properly stapled.

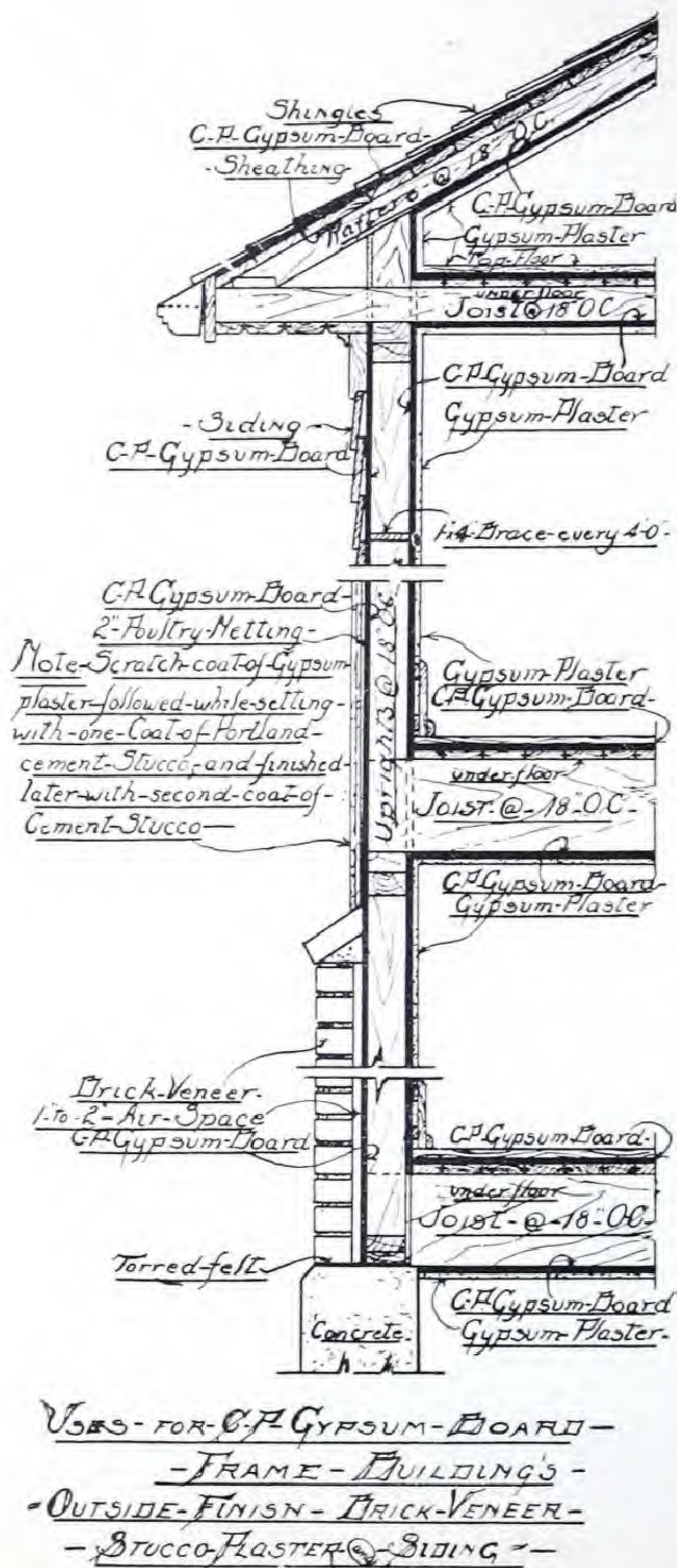
No. 6—Plastering, First Coat. First coat to be of Pulpstone Hardwall Plaster (mix 1 part Pulpstone to 1 part sharp sand by measure) applied directly to the Board, and shall be followed immediately, and before it has time to set, with coat of Portland Cement Stucco, made up as follows:—

No. 7—Second Coat. One part Portland Cement to three parts clean sharp sand, to which add 25% Hydrated Lime by weight, to which add an integral waterproofing compound.

No. 8—Third Coat. Third and finishing coat to be applied when second coat has **SET**, composed of as follows: One part Portland Cement to three parts clean sharp sand. Add 25% Hydrated Lime by weight, to which add an integral waterproofing compound, to be used according to manufacturer's directions.

Caution—Do not apply lime mortar to Gypsum Board.

The Most Economical and Practical Method of Fireproofing Frame Construction



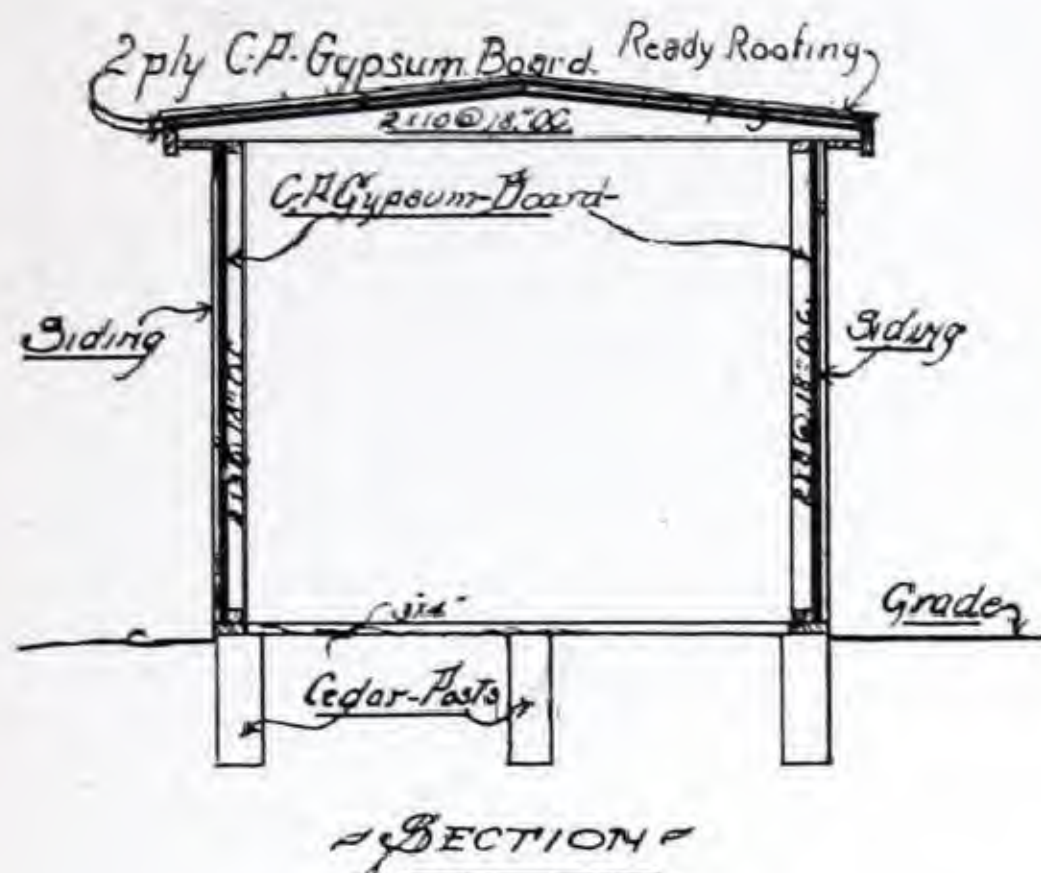
DISPLACE LUMBER
SHEATHING and
BUILDING PAPER
with

GYPSUM BOARD

which will insulate your building from heat or cold, also provide an effective fire stop.

For brick veneer or clapboard construction, Gypsum Board can be used in place of lumber sheathing and building paper. A considerable saving in cost is effected besides making the building more fireproof, warmer in winter, and cooler in summer. With ordinary bracing of the studding, spaced to 16 or 18 inch centres, Gypsum Board will give ample stiffness to frame buildings.

Gypsum Board for the Garage



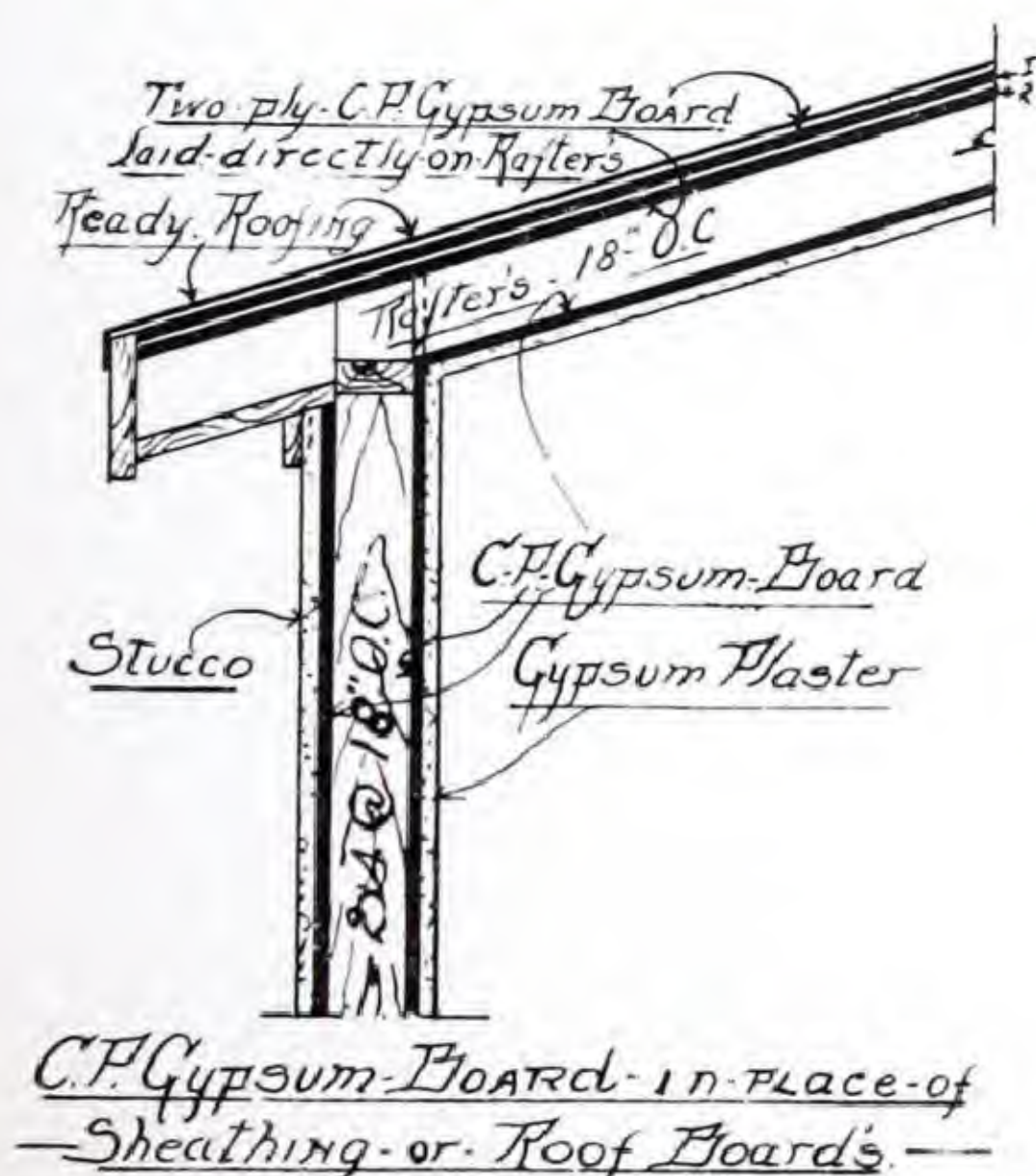
ECONOMICAL—
FIREPROOF—
QUICKLY ERECTED—

Cool in Summer
Easy to Heat

— GARAGE —
of
— Frame and C.P. Gypsum Board Construction —

Write us for Plan and
Quantities

Cut shows in detail some of the many uses of
Gypsum Board for Roofs



IT IS UNEQUALLED

No Condensation — Heat from
Rays of Sun will not penetrate.
Costs less than Wood Sheathing
and Shingles or other types—

IS FIREPROOF



Houses at Paris, Ont., built by Penmans Limited.

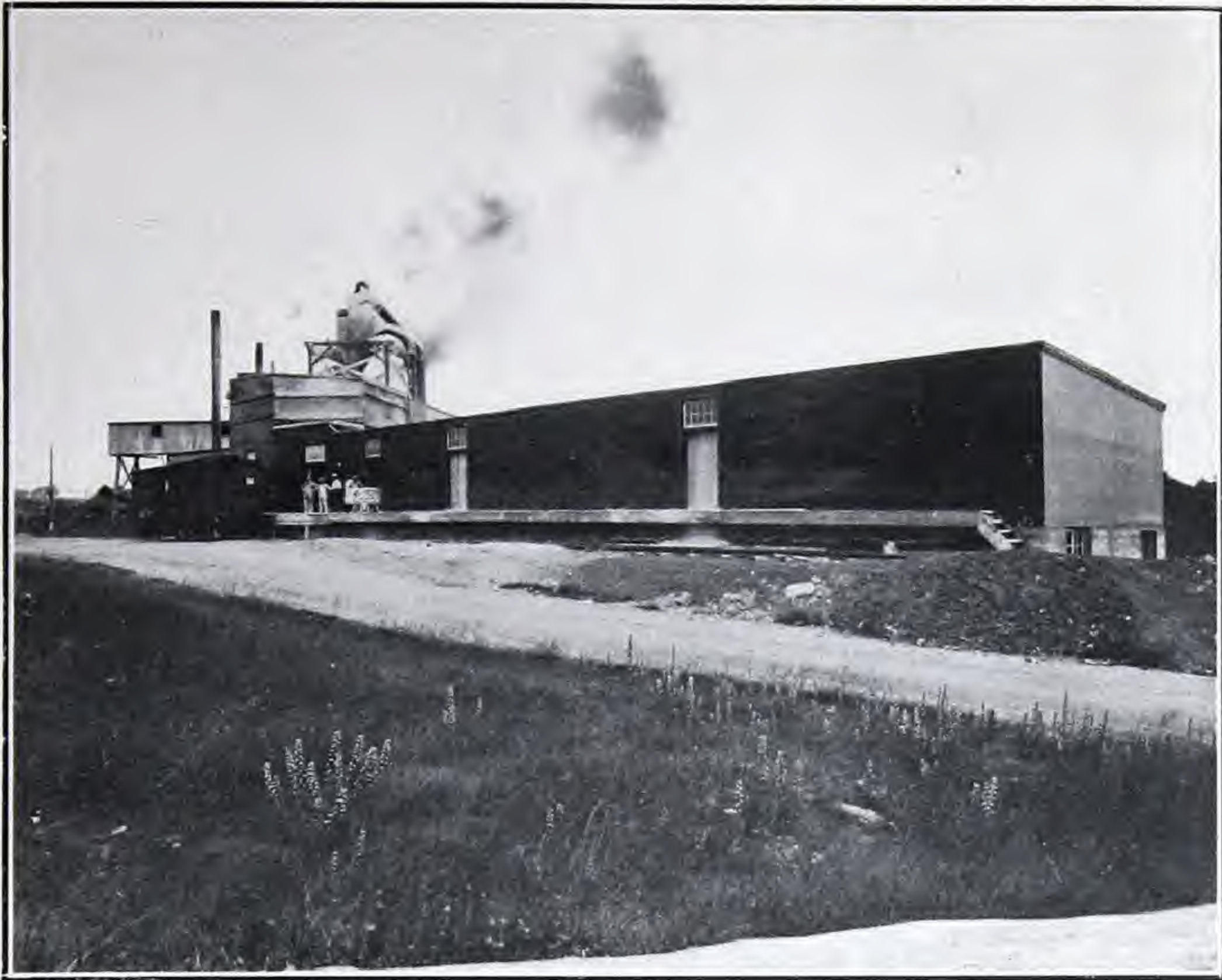
Gypsum Board as a Foundation for Exterior Stucco

Our specifications on Page 17 covering the use of Gypsum Board and exterior Stucco are entirely practical, and have been proved so on numerous buildings erected in various parts of the Province of Ontario and Quebec.

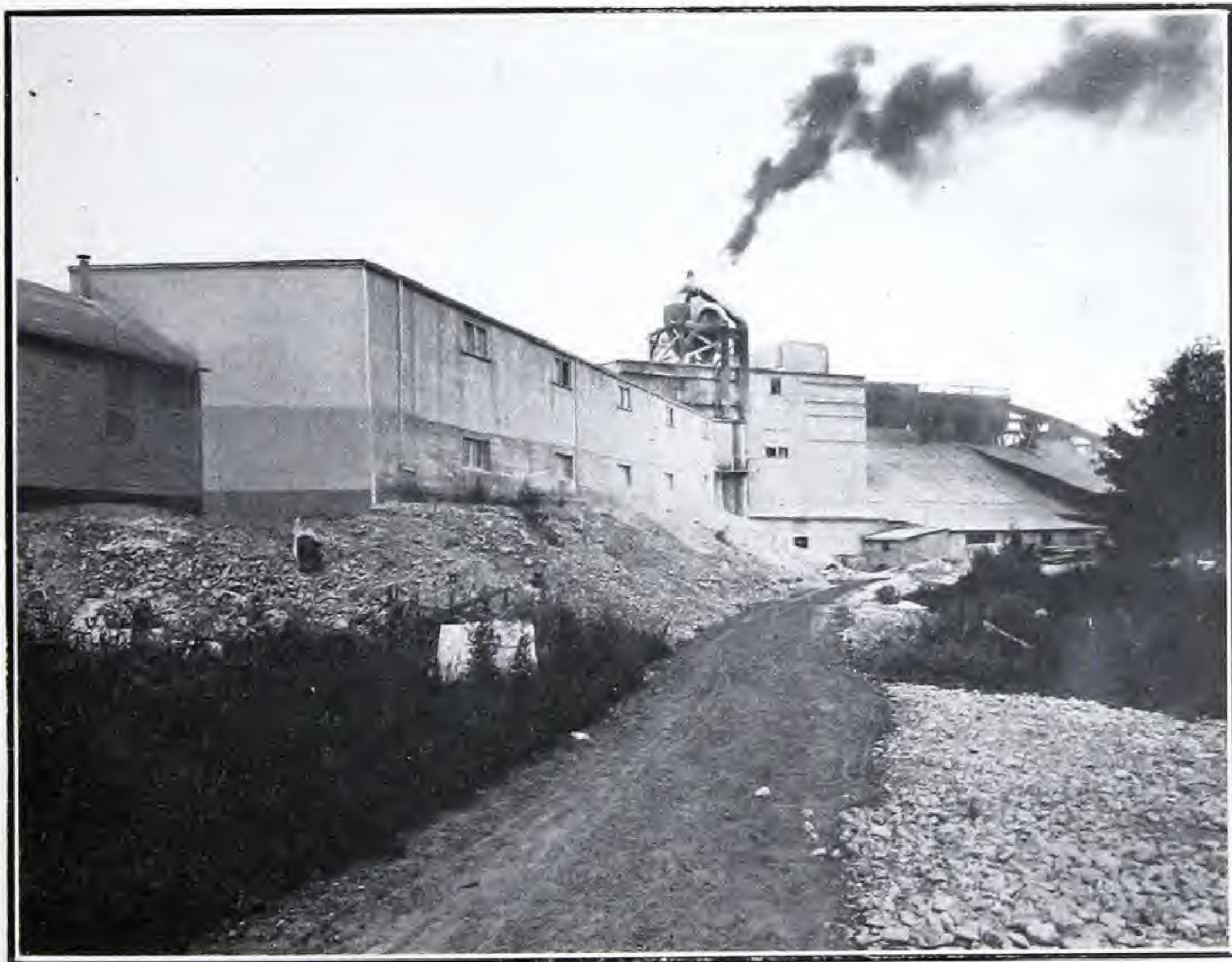
This is the cheapest and safest method of fireproofing frame construction that we know of. Our own factory at Elora, Ontario, and other buildings constructed by us at Caledonia, Toronto, etc., have been Stuccoed in this manner and have proved entirely practical. The amount we save each year in insurance more than pays the bank interest on the money invested.

The appearance of the Stucco can be greatly enhanced by using POZZO. This is a waterproofing Stucco of great strength. It is pure white and does not change color when wet. Instead of using the third coat as stated in our specifications, beautiful results can be obtained by using Pozzo. The rest of the exterior specifications need not be altered. No Hydrated Lime need be added to Pozzo, all that is necessary is to mix water with it to the proper consistency and apply.

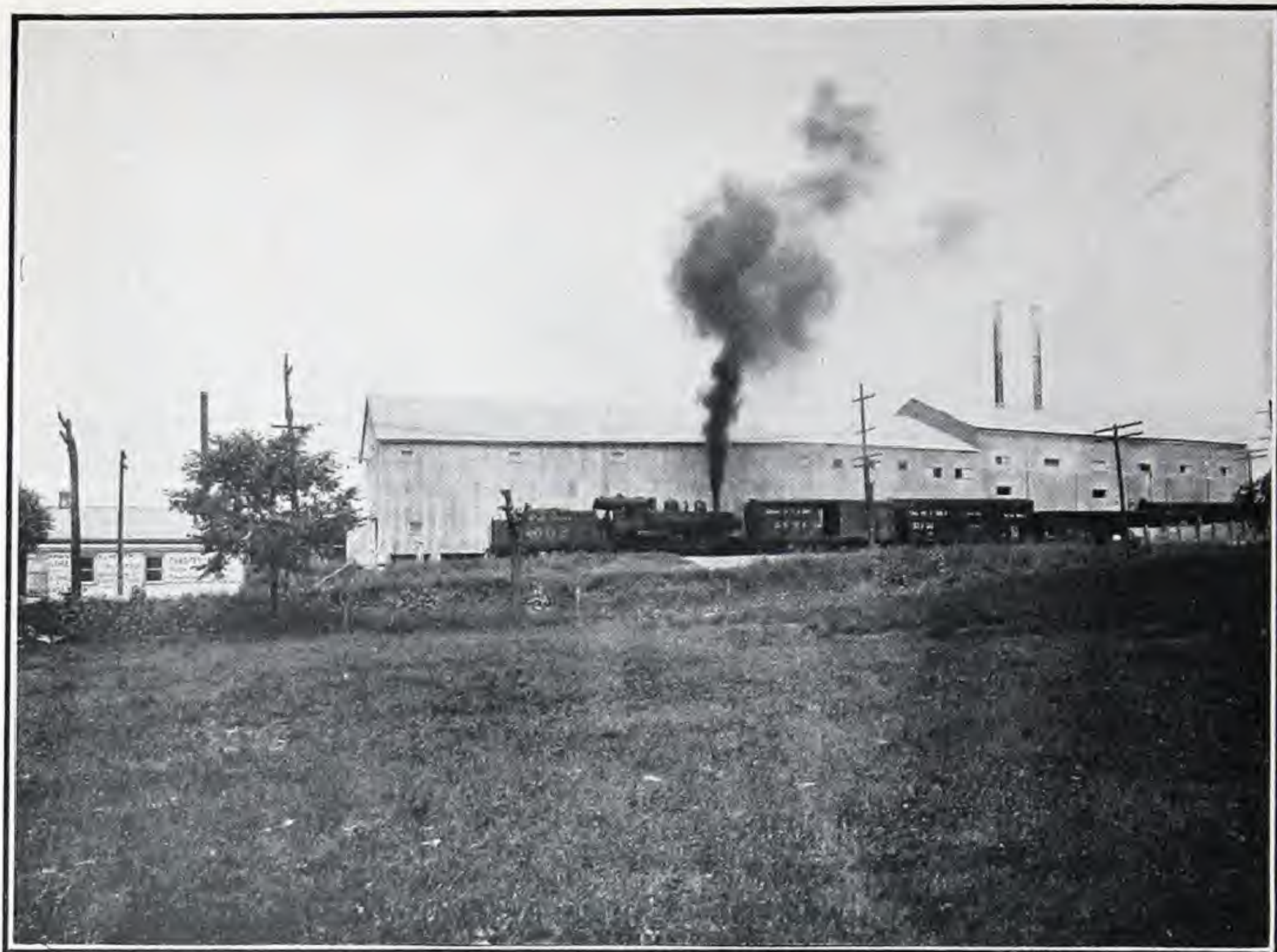
We would be very pleased indeed to confer with you and give the quantities of our materials necessary in construction work of this character.



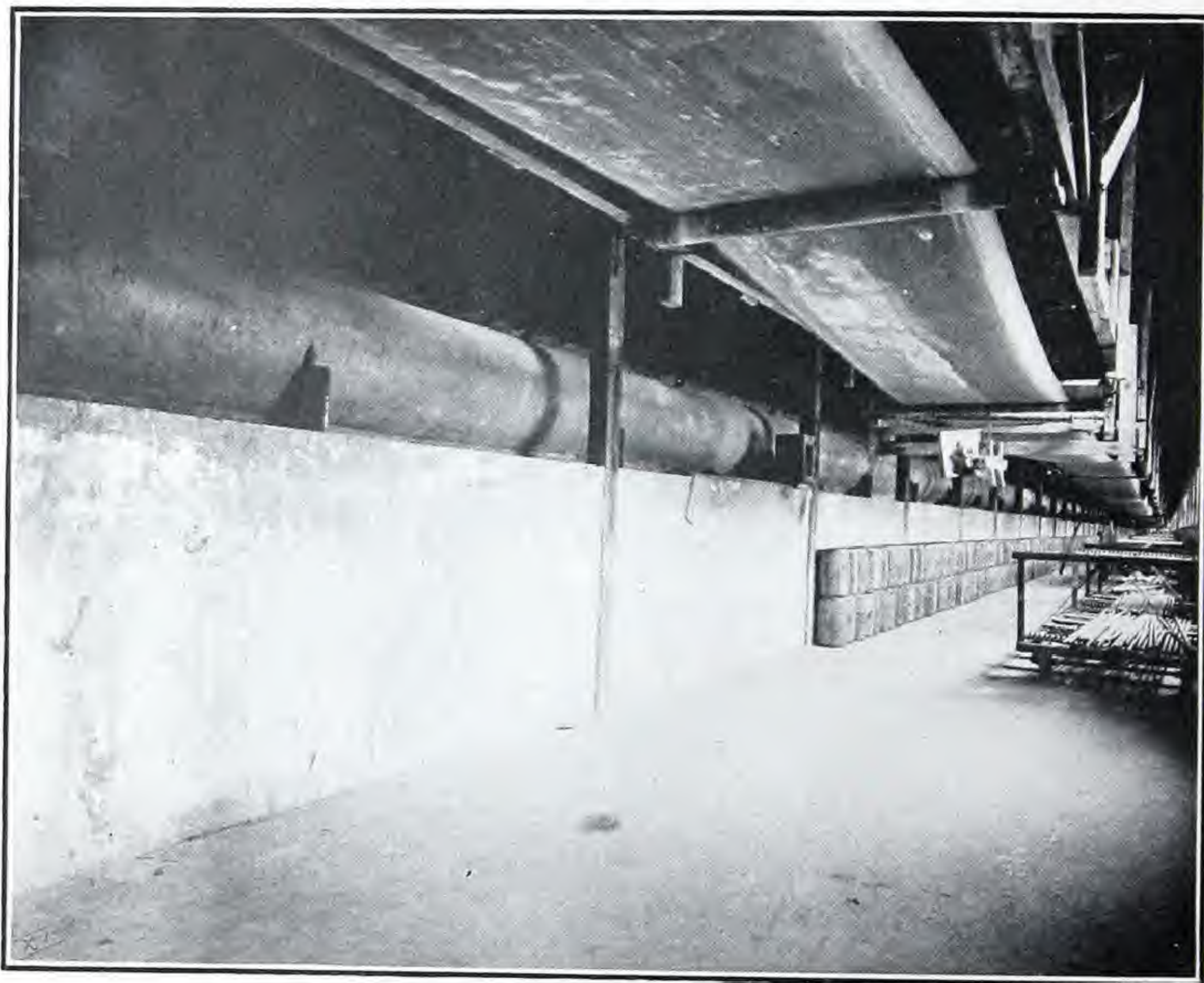
Alabastine Co.'s Hydrated Lime Plant at Elora, Ont., made Fireproof with Gypsum Board and Plaster.



Mill construction where Gypsum Board and Plaster was used inside and outside, including roofs and floors, over wood frame. No insurance is carried on these buildings. They were erected some years ago and have stood up in every respect.



Cut of Ontario Gypsum Co.'s Caledonia Mill.



Interior view of Gypsum Board Mill at Caledonia, Ont., showing long belt and drier.
Drier is built of Gypsum Board and Plaster—NO LOSS OF HEAT.

WALKER PRESS LIMITED
PARIS, ONTARIO